

MONTANA - IDAHO

INTERAGENCY SMOKE MANAGEMENT INTEGRATION STRATEGY

- for the -

Mitigation of Public Health and Welfare Impacts Caused by
Smoke From Unplanned Ignitions

Approved by the
Northern Rockies Coordination Group

July 3, 2009

PARTICIPANTS

USDI, Bureau of Land Management
USDI, National Park Service
USDI, Fish and Wildlife Service
USDI, Bureau of Indian Affairs
USDA, Forest Service, Region One
USDA Forest Service, Region Four
State of Montana
State of Idaho

EXECUTIVE SUMMARY

This Integration Strategy (Strategy) establishes a protocol for coordination and communications between the Federal Land Managers (FLMs), Montana Department of Environmental Quality, and the Idaho Department of Environmental Quality, hereafter collectively referred to as DEQ. These partners will collaborate to provide public information and assist in local and state outreach efforts regarding unplanned ignitions. This includes information about the natural role of wildfire in ecosystem maintenance, restoration, and the effects of smoke on public health. and welfare.

Through this Strategy, FLMs and DEQ identify methods of communication to facilitate actions that mitigate smoke impacts and to provide information to assist the public in taking reasonable precautions during unplanned ignitions.

This Integration Strategy is intended to:

- Clarify roles and responsibilities;
- Address public health and welfare considerations;
- Promote public education regarding the natural role of wildfire;
- Identify conditions which trigger coordination activities;
- Provide examples of potential management actions which mitigate smoke impacts;
- Provide for interagency information exchange for smoke management and air quality planning purposes; and
- Provide for evaluation and revision as necessary.

This Integration Strategy is NOT intended to:

- Act as a legally-enforceable document;
- Constitute compliance with Best Available Control Technology (BACT);
- Require certain wildfire management response activities;
- Increase the burden of smoke management activities at the field level;
- Circumvent or otherwise invalidate activities of the MT/ID State Airshed Group; or
- Substitute for any state or county air quality permit / authorizations.

Background

Smoke management concerns from unplanned ignitions have prompted FLMs and DEQ to develop this Strategy to annually assess and discuss potential management actions that may be used to mitigate smoke impacts. Due to the nature, location, and increased frequency of unplanned ignitions in the West, it is imperative that state and federal agencies work cooperatively to address smoke impacts for the protection of public health and welfare.

Purpose

The purpose of this Strategy is to assist in increasing public understanding of the complexity of unplanned ignitions and to establish a protocol for communicating between FLMs and DEQ. The Strategy outlines actions for sharing information to mitigate smoke impacts for the protection of public health and welfare.

The guiding principles of the 2001 Federal Fire Policy adopted by the U.S. EPA, FLMs, and the National Association of State Foresters include: “Firefighter and public safety as the first priority in every fire management activity” and that “Fire management plans and activities incorporate public health and environmental quality considerations.”

Accordingly, the mutual goal of both FLMs and DEQ is to consider a full spectrum of management actions that may be used when unhealthy air quality levels occur so that adverse public health effects caused by smoke from unplanned ignitions is mitigated.

Because smoke emissions from unplanned ignitions typically affect Montana and Idaho airsheds, DEQ believes consistency in FLM approach across states is critical to mitigate smoke impacts and to provide air quality protection and smoke management coordination activities.

This Strategy will be reviewed and, if necessary, revised no later than July 1 of each year.

Integrated Strategy

During periods of poor atmospheric dispersion and deteriorating ambient air quality, FLMs and DEQ will regularly communicate to characterize current and future ambient air conditions. As appropriate, the partners will implement smoke impact avoidance strategies including a full spectrum of management actions to any new or existing unplanned ignitions as quickly as practicable. Smoke impact avoidance strategies considered must be flexible to accommodate the changing needs and priorities of both FLMs and DEQ.

Specifically, FLMs and DEQ will implement a Strategy involving the following three Management Actions: as part of the procedures for managing smoke from wildfires:

- (1) FLMs and DEQ will contact each other when unhealthy air quality conditions exist or when periods of poor atmospheric dispersion are predicted **[Contact]**;
- (2) FLMs will reinforce existing federal guidance and applicable legal regulations in wildland fire planning and implementation documents e.g. Wildland Fire Implementation Plans (WFIP), Wildfire Situation Analysis (WFSa), and the Wildland Fire Decision Support System (WFDSS) process to ensure that smoke management is addressed commensurate with wildfire activity and complexity **[Documentation]**; and
- (3) FLMs and DEQ will collaborate on public information and outreach efforts using new and existing information personnel and methods to inform the public and to offer instructions and ample advance warning so that individuals can choose to take actions to mitigate the effects of smoke on their health **[Education]**.

Management Actions

- (1) **Contact.** Information sharing and activity coordination among FLMs and DEQ will occur before, during, and after unplanned ignitions. Such coordination may include, but is not limited to the following:
 - FLMs may make opportunities for DEQ to participate in the Northern Rockies Multi-Agency or Great Basin Coordination Group (MAC) calls.
 - FLMs may make opportunities for aerial and/or field observations of wildfires available to DEQ, when reasonably available.
 - FLMs or DEQ may place portable ambient air monitors in smoke-sensitive areas as needed. FLMs should make monitoring data available to DEQ via satellite link on an hourly basis when reasonably available.
 - FLMs will incorporate smoke management information whenever possible as a routine feature of wildfire information offered by the unit or visiting PIO during the incidents to inform the public, incident management teams, and/or other land managers.
 - FLMs will make maps depicting areas where unplanned ignitions are most likely and, when feasible, provide DEQ opportunities to review and comment on WFIPs, WFSAs, or WFDSS planning documents.

- FLMs and the DEQ Smoke Management Coordinators will jointly and routinely track smoke plume locations and smoke distribution using satellite imagery and/or other sources of remote sensing.
- DEQ will disseminate smoke advisory information about current and predicted smoke concentrations to assist FLMs and the public in making informed decisions.

(2) Documentation. FLMs will integrate smoke management activities into their normal procedures when developing unplanned ignition plans and processes. Wildfire management teams will also be briefed to fully consider smoke management when developing plans and processes and conducting public information and outreach activities.

If a wildfire requires a WFSA, WFIP, or WFDSS, FLMs should consider the full spectrum of management actions to address potential consequences of smoke on air quality and impact to public health and welfare.

Examples of wildfire plans and / or processes to integrate smoke management activities:

- Delegations of Authority for incident management; and
- WFIPs, WFSAs, and WFDSS

(3) Education. FLMs and DEQ will share the responsibility for proactively providing public information on smoke emissions from unplanned ignitions before, during and after it occurs. Using communication professionals at the local, state and regional level will ensure the information is clear, consistent and concise. Public information and outreach activities may include, but is not limited to the following:

- Providing timely and clear information about health effects of smoke and potential smoke impacts from unplanned ignitions to Public Information Officers (PIOs), unit Public Affairs Officers (PAOs), Incident Safety Officers, fire prevention teams and others for dissemination to various audiences during wildfire events. Newsletters, websites and public service announcements are appropriate channels for information professionals to use.
- Identifying smoke sensitive areas before the fire season, such as communities, recreational areas, public highways, hospitals, schools, large planned outdoor events, and groups at high risk for health related problems. FLMs and DEQ will communicate those identified areas to PIOs, PAOs and others for targeting information on how to prepare for smoke impacts when they may occur.

- Pre-season coordination to share policies and strategies for smoke mitigation with DEQ and interested partners.
- Ensuring emergency response plans and actions, including state emergency episode avoidance plans, natural events action plans, and real-time website information, are known, understood and available to communicators for effective public notification and recommendations.
- Providing PIOs, PAOs, and others with information regarding the natural role of wildfire, the effects of smoke on public health and welfare, and the actions an individual could take that might reduce personal health impacts. In collaborating with communications professionals, this public information and outreach can include maintaining and updating website information, holding informational meetings, or establishing hotlines based on a determination of the most effective strategy for the affected area.

Communication Levels Between FLMs and DEQ

Communication Levels are intended to provide a mechanism which triggers FLMs and DEQ to initiate potential Management Actions. These Communication Levels do not preclude more restrictive agency-specific measures nor should they preclude alternative assessments of unplanned ignitions that may result in mitigating smoke impacts on public health and welfare. The establishment of a Communication Level does not necessarily constrict the use of an unplanned ignition as a management tool nor should its initiation add any additional unreasonable workload.

The intent of the Communication Levels is to facilitate and document on forms already in use, an acceptable, systematic, interagency review of smoke, and to furnish the public with appropriate air quality information. The following three Communication Levels are based upon observed and predicted air quality impacts on public health and welfare through a collaborative discussion between FLMs and DEQ.

Level 1 - Minor Impacts:

Assessment. Smoke impact on public health and welfare is considered minor. Minor impacts may be characterized by the following indicators and may result in Level 1 Management Actions:

- Smoke is expected to be produced for a short period of time or is barely visible to the public;
- Smoke is not expected to exceed state or federal air quality standards;

- Decreases in visibility indicate only slight degradation of air quality that does not reach the category of “Unhealthy for Sensitive Groups” when using the visibility ranges in Table 1.
- Individual residents, county health officials, coaches, school representatives, etc. are expressing few or no concerns about smoke;
- Regional fire Preparedness Level is at a 1 or 2; and/or
- Minimal impacts are expected to sensitive features like communities, schools, parks, airports, roadways, summer camps, outfitter camps, etc.

Management Actions. IF Minor Impacts occur, THEN the following Management Actions may be considered:

- FLMs and DEQ will jointly evaluate unplanned ignition incident reports to monitor smoke impacts and their current and predicted air quality impacts on public health and welfare.
- FLMs will brief DEQ on current unplanned ignition activity and strategies based upon the best available information and assessments.
- FLMs will review emission avoidance strategies and routinely assess throughout the duration of unplanned ignition activity.
- FLMs will alert their PIOs/PAOs to the existence of Level 1 smoke conditions

Level 2 - Moderate Impacts:

Assessment. Smoke impact on public health and welfare is considered moderate. Localized impacts may be characterized by the following indicators and may result in Level 2 Management Actions:

- Some public concerns for smoke impacts and health-related complaints are indicated by area residents, county health officials, coaches, school representatives through phone calls to local, state and federal agencies or media;
- Smoke is visible to the public over several days;
- Decreases in visibility indicate moderate degradation of air quality which reaches the category of “Unhealthy for Sensitive Groups” when using the visibility ranges in Table 1.
- Scenic views, roads, and some residences experience short-term decreases in visibility;
- Regional fire Preparedness Level is at 3 or 4; and/or
- Smoke intrusions into sensitive features like communities, schools, parks, airports, roadways, summer camps, outfitter camps, etc. is occurring.

Management Actions. IF Moderate Impacts occur, THEN the following Management Actions may be considered:

- FLMs and DEQ will evaluate unplanned ignition incident reports to monitor smoke impacts and begin considering possible emission avoidance strategies to protect public health and welfare now and into the future.
- FLMs will brief DEQ on current unplanned ignition activity and strategies based upon the best available information and assessments.
- FLMs will review emission avoidance strategies and routinely assess throughout the duration of unplanned ignition activity. This includes the full spectrum of Management Action responses.
- FLMs will assess the potential consequences of the smoke on air quality and the impact to public health and welfare will be considered in developing management alternatives in WFSAs, WFIPs, or WFDSS as required in both processes. See 'Documentation' under the Management Action section.
- Strategies for smoke mitigation or related decisions are communicated to unit or fire communicators for inclusion into responses to public concerns through outreach activities.
- Once air quality improves to below the category of "Unhealthy for Sensitive Groups" for 72 hours or more, FLMs and DEQ should re-evaluate and determine if Level 2 Management Actions should remain or if Level 1 Management Actions should be conducted.

Level 3 - Major Impacts:

Assessment. Smoke impact on public health and welfare is considered major. Major impacts may be characterized by the following indicators and may result in Level 3 Management Actions:

- Concern for public health and welfare impacts is raised regionally and large segments of the public are actively expressing their concerns about smoke through contacts to the agencies, elected officials and media
- Situations require special and sometimes difficult smoke mitigation actions such as near wildland urban interfaces, power lines, communication towers, roadways, etc;
- Smoke is readily visible to the public and is projected to remain several days to weeks;

- Major smoke intrusions are occurring in sensitive areas, such as hospitals and major airports, at “Unhealthy” category level and triggering adverse health effects.
- Decreases in visibility indicate considerable degradation of air quality which reaches the category of “Unhealthy” when using the visibility ranges in Table 1 on page 10.
- Scenic vistas, roads, and residences may experience long-term visibility impairment or significant, short-term visibility impairment;
- Regional fire Preparedness Level is at 4 or 5; and /or

Management Actions. IF Major Impacts occur, THEN the following Management Actions may be considered:

- FLMs and DEQ will evaluate unplanned ignition incident reports on a daily basis to monitor smoke impacts and consider possible emission avoidance strategies to protect current and future public health and welfare now and into the future.
- FLMs will brief DEQ on current unplanned ignition activity and strategies when conditions or strategies change using the best available information and assessments.
- FLM and DEQ may conduct additional smoke modeling and monitoring to further evaluate potential effects of smoke impacts on specific sensitive features.
- FLMs will review emission avoidance strategies throughout the duration of unplanned ignition activity. This includes the full spectrum of Management Action strategies.
- FLMs will assess the potential consequences of the smoke on air quality and the impact to public health and welfare will be considered in developing management alternatives in WFSAs, WFIPs, or WFDSS as required in both processes. See ‘Documentation’ under the Management Action section.
- Strategies for smoke mitigation or related decisions are communicated to unit or fire communicators for inclusion into responses to public concerns through outreach activities. Outreach activities are intensified.
- Once air quality improves to the category of “Unhealthy for Sensitive Groups” for 72 hours or more, FLMs and DEQ should re-evaluate and determine if Level 3 Management Actions should remain or if Level 1 or 2 Management Actions should be conducted.

Web-Based Incident Information

DEQ employees may request “Viewer” access to the password-controlled Wildland Fire Decision Support System (WFDSS) at the following web site. Viewers can see all ongoing incidents, with analyses and management objectives. WFDSS will be used by all Forest Service managers in 2009. Department of Interior bureaus and agencies are required to use WFDSS beginning in 2010, and many have elected to implement use in 2009.

http://wfdss.usgs.gov/wfdss/WFDSS_Home.shtml

Inciweb can also be used to find specific information about specific fires of interest, complete with regular fire status updates, maps, photographs, and can quickly update smoke and public health information that is automatically fed to Twitter.

<http://www.inciweb.org/>

The daily Incident Management Situation Report provided by the National Interagency Coordination Center provides a listing of all ongoing significant fires by geographic area.

<http://www.nifc.gov/nicc/sitreprt.pdf>

MODIS Large Incident Maps for the US and Canada are updated each Friday, or as frequently as conditions warrant.

<http://activefiremaps.fs.fed.us/>

Northern Rockies Coordination Center (NRCC) – for fire information in Montana and Northern Idaho:

<http://gacc.nifc.gov/nrcc/information/information.htm>

Eastern Great Basin Coordination Center (EGBC) – for fire information in southern Idaho:

<http://gacc.nifc.gov/egbc/>

Both NRCC and EGBC will provide spreadsheets depicting information on unplanned ignition events (greater than 100 acres??), which will be updated as significant changes in event activities occur.

TABLE 1
Visibility Ranges Used to Determine Health Effects Categories*

Visibility Range	Health Effect Category	Health Effect Explanation
13.4 Miles and Up	Good	No health impacts are expected when air quality is in this range.
13.3 Miles to 8.8 Miles	Moderate	Unusually sensitive people should consider limiting prolonged outdoor exertion.
8.7 Miles to 5.1 Miles	Unhealthy for Sensitive Groups	Active children and adults, and people with respiratory disease, including asthma, should limit prolonged outdoor exertion.
5.0 Miles to 2.2 Miles	Unhealthy	Active children and adults, and people with respiratory disease, including asthma, should avoid prolonged outdoor exertion; everyone else, including children, should limit prolonged outdoor exertion.
2.1 Miles to 1.3 Miles	Very Unhealthy	Active children and adults, and people with respiratory disease, including asthma, should avoid all outdoor exertion; everyone else, including children, should limit outdoor exertion.
Less than 1.3 Miles	Hazardous	All children and adults should avoid or limit all outdoor exertion.
<p>The Procedure for making personal observations to determine the health effects category in local areas without weather or ambient air monitors is:</p> <ol style="list-style-type: none"> Face away from the sun. Determine the limit of your visible range by looking for targets at known distances (miles). Visible range is that point at which even high contrast objects totally disappear. Use the values above to determine the local forest fire smoke category. 		

***NOTE:** Visibility ranges used to determine health effects are based upon short term impacts and are related to the hourly concentration break points. It is important to note that many hours at one level will usually result in a higher cumulative impact. If conditions have stayed more or less constant in the moderate or higher level for 8 hours the equivalent health category should be adjusted one category higher.

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